PEDIATRICS

UNDER THE CHARGE OF
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The Necessity of Clear Thinking in Milk Modification.—HILL (*Jour. Am. Med. Assn.*, March 5, 1921) states that there are several methods of milk modification in good use. It is not of great importance which one is used provided the physician gives enough food in total quantity and the proper combination of the individual food elements to suit the digestion of the baby he is dealing with. It is necessary that he should know approximately the amount of each food element in the mixture in order that he may vary these quantities at will, that he may be able to proceed in a rational manner and that he may be able to express clearly to others in the exact language of figures what he has done. The modification of milk is the mechanical part of infant-feeding. He thinks that the best thing for the average physician to do is to learn the whole milk method and the gravity cream and skimmed milk method. He should discard the methods of top milk dilutions. With these two methods he will have at his hand a large range of formulas, and if he desires to give more fat than can be obtained by the whole milk method he can turn to gravity cream and skimmed milk method.

Clinical Investigations of Xerophthalmia and Dystrophy in Infants.—BLOCH (*Jour. Hygiene*, January, 1921) states that there are fats which are indispensable for children because they contain specific bodies essential for normal growth. If these lipoid bodies termed "fat soluble A" bodies by McCollum are absent from the food for a long time an inhibition of growth will occur and the conditions which the writer has termed Dystrophia alipogenetica will finally appear. This condition involves a great susceptibility and lowered resistance to all infections and often leads to xerosis of the conjunctivæ and cornea associated with night blindness. The xerosis has a great tendency to result in keratomalacia. In its first stage xerophthalmia resembles a slight conjunctivitis. The children develop photophobia, their eyes are red and there is a slight secretion. Xerophthalmia generally occurs in spring, the time when its growth is at its maximum. The disease is most frequent among the children of the poorest country people, and it is always due to an unsuitable artificial diet, generally the replacing of whole milk partly or completely by centrifuged milk, buttermilk or flour preparations. It may appear in children who have received whole milk and cream, but in these cases the milk and cream have been boiled for too long a time or have been subjected to other kinds of drastic treatment, which have destroyed the specific lipoid bodies. Xerophthalmia is easily cured when it is recognized in time. The best treatment is cod-liver oil, but whole milk, cream and butter and also eggs contain the necessary lipoids. It is important to remember that these foods should be only subjected to the ordinary short boiling. The disease is fairly common in Denmark and apparently more so than

in other countries. This is explained by the fact that milk and dairy products are a great part of the exports and the natives deprive themselves to furnish these products for market. Many of the cases of blindness and leukoma attributed to the eye diseases are perhaps due to xerophthalmia. This is perhaps emphasized by the fact that this blindness is increasing, whereas the incidence of gonorrheal and other forms of conjunctivitis is becoming less in Denmark.

Lactic Acid Milk.—SHERMAN and LOHNES (*Jour. Am. Med. Assn.*, October 2, 1920) undertook this study for the purpose of investigating the variations of this preparation of milk and to devise a means to prevent their occurrence. Lactic acid milk differs from ordinary sour or spoiled milk in that it is a sour uncontaminated sterile milk. The authors have used it for more than eight months with very good results. With their method of mixing, four of the points of advantage which are emphasized in protein milk are obtained. There is a relatively high protein, a full fat, the fine curd during digestion and the concentrated food. They believe that it is the lactic acid in the protein milk that stimulates digestion, both gastric and intestinal, and sterilizes the intestinal content. Lactic acid milk contains only 1.5 per cent. more of lactose than protein milk. Lactic acid milk contains nearly twice the amount of the soluble salts as does protein milk and less of the insoluble salts. They use two sorts of lactic acid milk, one made from skimmed milk and the other from whole milk. This makes the formulas very flexible as regards the use of fats. Their policy is to begin with the product made with skimmed milk and gradually lessen the dilution, and when undiluted lactic acid milk is reached the form made from whole milk is begun well diluted and the dilution gradually eliminated. In order to make the formula smooth barley water is used in the formulas. This is of a strength of from 0.5 to 0.75 per cent. The first method is to warm the milk, which has been boiled and then cultured, and put it away in a fireless cooker or in a nursery refrigerator. If put away in the evening at 85° F., in the morning it will be found to have undergone a proper fermentation with an acidity of from 70 to 90. To prevent further fermentation it is put on ice or preferably boiled rapidly. While being boiled it must be beaten with an egg beater. The other method is more simple. They take the milks, either skimmed or whole, and in the morning add the ferment in the proportion of 1 ounce of ferment to 31 ounces of milk. This is placed in a warm place until the next morning. The whole or skimmed lactic acid milk is then diluted with an equal part of whole or skimmed sweet milk that has been boiled, and as the acidity of the lactic acid milk will be from 170 to 190, we thus get the desired acidity of from 75 to 95. This mixture is boiled or not as desired and is placed away on the ice, where it will keep well for twenty-four hours. Modifications can be made according to the need of the case. To supply the carbohydrate needs corn syrup is used. Infants show improvement of appetite and they like the formula better and are more liable to retain it by this method. They soon lose their ashy-gray color. Their temperature becomes more stable. They are less fretful. Their sugar tolerance seems less easily broken and gas formation is less likely to occur. The loss of weight is overcome by a substantial weekly gain.